

The Interface Hypothesis: Representation, Processing, or Both? A Study on Heritage speakers of Spanish in the Netherlands and in the US

This study tests the Interface Hypothesis (e.g. Sorace, 2005) (hereafter: IH) with heritage speakers of Spanish in the Netherlands. The IH predicts increased vulnerability in bilingual populations for phenomena which lie at the crossroads of two domains. A distinction is made between internal interfaces, which connect two formal linguistic modules, such as syntax and semantics, and external interfaces, in which syntax interacts with domains outside of formal grammar, such as discourse/pragmatics. The latter are claimed to be particularly vulnerable. Two possible explanations are offered for this vulnerability: on a representational account, the grammatical system of one language is affected by that of another language (Tsimpili et al., 2004). On a processing account, the vulnerability at the interfaces might (also) be due to processing limitations induced by bilingualism itself (e.g., Sorace & Filiaci, 2006). The two explanations make different predictions: on a representational account, vulnerability at the interfaces is expected only if the two languages in contact differ with respect to the phenomenon in question. On a processing account, vulnerability is expected regardless of the specific language combination. Moreover, a processing account predicts more problems in tasks that are cognitively demanding.

Unlike most previous studies, which have tested the IH by comparing two completely different phenomena, this study comparing interfaces not between but *within* phenomena. The two phenomena investigated are 1) the subjunctive and 2) subject position. These two phenomena were tested by means of an acceptability judgment task and an elicited production task. In both tasks, participants were presented with short stories. In the judgment task, these stories were followed by two sentences that had to be rated on a scale from -2 to 2, while in the elicited production task, the stories were followed by the beginning of a sentence which the participants had to finish out loud.

Study 1 tested knowledge of the subjunctive in three different contexts, each of which reflects a different interface location: obligatory use of the subjunctive in complement clauses (syntax), variable use of the subjunctive in relative clauses (syntax-semantics) and variable use of the subjunctive in complement clauses with negated epistemic, perception and perception verbs (syntax-pragmatics). 27 heritage speakers of Spanish, and 18 monolingual speakers of Spanish participated in this study. The results, as illustrated in figures 1 and 2, show that heritage speakers diverged more from monolingual speakers in the two interface contexts compared to in the syntactic context, and the divergence was greatest in the external interface context, in line with the Interface Hypothesis. The divergence was moreover greater in production than in judgment, providing support for a processing account.

The second study tested subject position in Spanish using an acceptability judgment task and an elicited production task, similar to study 1. In this study, three groups participated: a group of Spanish heritage speakers in the Netherlands (N=19), a group of matched Spanish heritage speakers in the US (N=27), and a control group of monolingual Spanish speakers (N=20). These participants were tested on their sensitivity to three factors determining word order: verb type (syntax-semantics), focus (syntax-discourse) and definiteness (syntax-pragmatics/discourse). The results, which were similar in judgment and production, showed that the monolinguals were sensitive to all three factors. The Dutch group was sensitive to verb type and definiteness, but not to focus, and the American group was sensitive only to verb type. The relative robustness of verb type and the vulnerability of focus is in line with the IH. The difference between the two heritage speaker groups with respect to definiteness is explained by influence from their respective majority languages: while Dutch exhibits a relation between definiteness and word order similar to Spanish, this effect is less pervasive in English (see examples 1 and 2). This shows that the particular language combination matters, which is in line with a representational account of interface vulnerability. The results from both studies

combined thus provide support for the IH and suggest that vulnerability occurs both at the level of representation and at the level of processing.

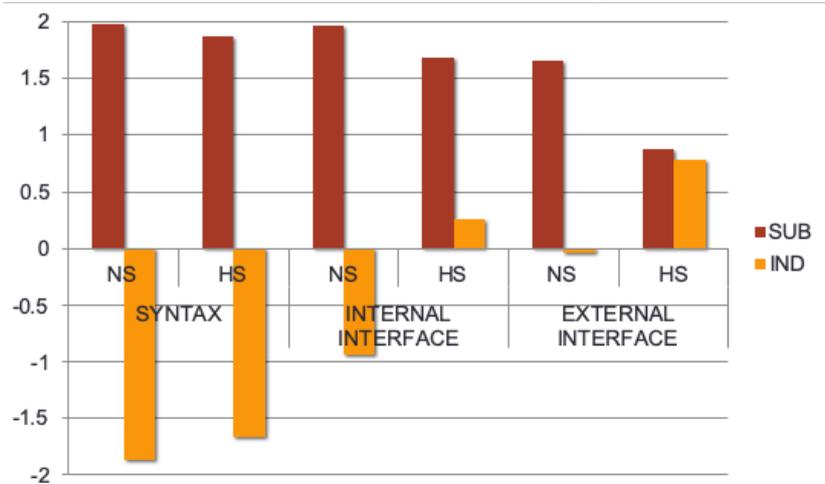


Figure 1: acceptability rating for HS (heritage speakers) and NS (monolingual native speakers) for the subjunctive in the three different contexts

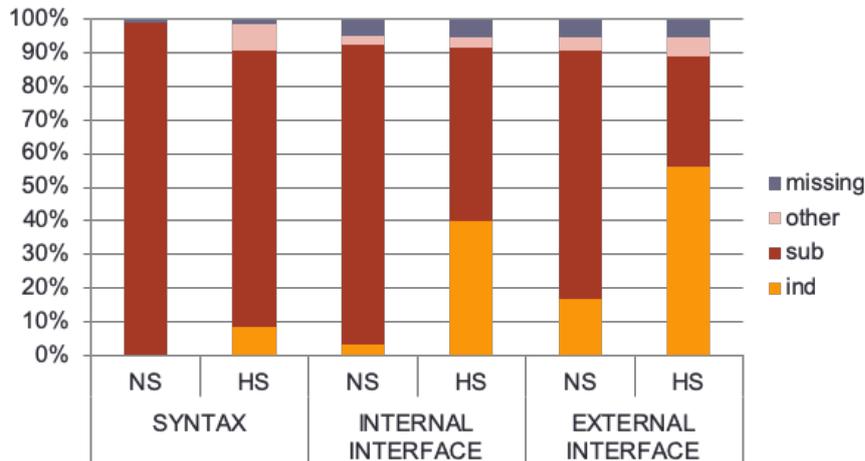


Figure 2: Production rates for HS (heritage speakers) and NS (monolingual native speakers) for the subjunctive in the three different contexts

Examples

- (1) *De man viel* (definite)
The man fell
- (2) *Er viel een man* (indefinite)
#There fell a man

References

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